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EDITORIAL

Gold and diagnostics—some staggering numbers

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Many of you probably know that gold nanoparticles enable many different types of diagnostic technologies. From simple pregnancy tests to FDA-approved molecular diagnostic kits for clinical use, these tiny particles of gold ensure the accuracy and reliability of such tests all over the world. However, what you may not be aware of is just how many of these tests are used on a yearly basis. It is something that I have long wanted to know more about, so over the last couple of months, I have been looking into the market in some depth.

The pregnancy testing kit is an example of a rapid diagnostic test (RDT). RDTs allow the reliable diagnosis of a condition or illness by individuals who may not be skilled in laboratory techniques or have access to advanced instrumentation. They are cheap and portable, making them particularly useful in remote or resource-poor parts of the world.

One condition where early diagnosis is critical to a successful therapeutic outcome is malaria. There are many angles to this, whether it be simply catching and treating the disease earlier, through to differentiating people who are suffering from a simple fever rather than malaria itself (hence avoiding unnecessary treatment with antimalarial drugs and lowering the development of drug resistance in communities). Thanks to the work of many NGOs and ministries of health around the world, reliable malaria RDTs now reach the frontline and are helping to combat this deadly disease.

Now, this is where the staggering numbers come in. In a discussion I had with colleagues at the Foundation for Innovative New Diagnostics, I asked if they had any feeling for how many of these tests were used on a yearly basis. The answer I got was 155 million. In 2011, 155 million malaria RDTs were sold for use around the world.[1] To the best of our knowledge, each and every one of these tests uses a minute quantity of gold to help ensure the accuracy and stability of the kit. We decided to try and bring this story to life and developed a short film to show how these tests impact communities around the world. If you are interested, please visit the site http://www.gold.org/video/play/gold_for_health/.

So for the next generation of gold technologies, we have another excellent issue of *Gold Bulletin* for the second quarter of 2013, comprising the usual diverse range of papers, reviews and literature highlights. Thanks as always to the authors for their submissions and to our reviewers for their hard work. Please visit our website at http://www.springer.com/materials/special+types/journal/13404 to sign up for alerts or submit your work.

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[1] World Malaria Report 2012. World Health Organization